

Honorable Arthur F. Sampson,
Administrator
General Services Administration
Washington, D. C. 20405

Dear Mr. Sampson:

Enclosed are the program and space requirements for the proposed new facility for the Federal Executive Institute and Managerial Training Center at Charlottesville, Virginia.

Mr. Donald J. Biglin, Director of our Bureau of Management Services, is responsible for this project and he has already conferred with Mr. Caluardi and Mr. Harvell. We have already received valuable assistance on this matter from Doug Harvell and his staff, for which we wish to express our appreciation.

We are looking forward to continued association with the Public Buildings Service staff on this important project. Please be assured we are prepared to cooperate in every way necessary to facilitate timely action on this proposal.

Sincerely yours,

(Signed) Robert E. Hampton *6/1-*

Robert E. Hampton
Chairman

Enclosure

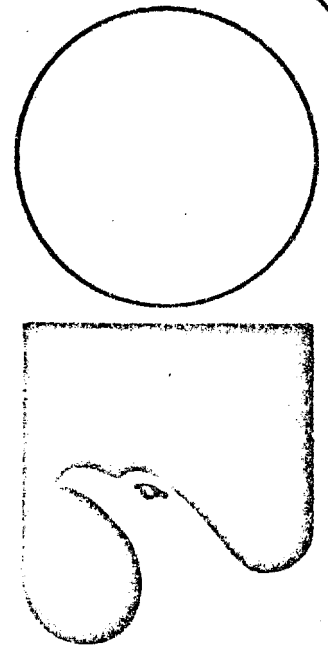
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carried 6/5/74
w/ Elaine Wynn*

Proposed
FEDERAL
EXECUTIVE INSTITUTE
AND MANAGERIAL
TRAINING CENTER
Charlottesville, Virginia



PROGRAM & SPACE
REQUIREMENTS

June 1974

prepared by
Office Services Division, BMS
US Civil Service Commission
Wash, D.C.

TABLE OF CONTENTS

	<u>PAGE</u>
A. <u>INTRODUCTION</u>	
1. Project Description	1
2. Authority	1
3. Justification	2
a. The need for a new facility	2
b. The desirability of co-location	4
c. The desirability of the Charlottesville, Va. site	5
d. The superior advantages offered by the University of Virginia campus	5
e. Medical, dental, business and recreational services	7
B. <u>SITE</u>	
1. Locale	9
2. Access	9
3. Topography	10
4. Soil	10
5. Utilities	10
6. Vegetation	11
7. Climate	11
8. Adjacent Influences	14
9. Zoning	15
C. <u>DESIGN CRITERIA</u>	
1. Objective	16

2. Expansion	16
3. Flexibility	16
4. Materials	16
5. Mechanical	17
6. Fire Control	18
7. Electrical	18
8. Communication	19
9. Art Work	19
10. Codes	19
11. Structural	19
12. Conservation	20
13. Human Values	20

D. SITE DEVELOPMENT

1. Utilities	22
2. Roads, Pathways and Parking	22
3. Landscaping	23

E. SPACE REQUIREMENTS

1. Common Use Facilities	25
2. Executive Program Facilities	38
3. Management Program Facilities	44
4. Site Development, Services and Recreation	51

F. DESIGN COMMENT

(To be supplied at a later date)

G. EXHIBITS

1. Area Map
2. Site Map
3. Proposed Highway Ramp
4. Topographic Map
5. Zoning Map
6. Climatological Data

A. INTRODUCTION

1. Project Description

The U. S. Civil Service Commission plans to acquire on a lease-construction basis a residential type consolidated management and executive training facility. The facility will house in individual living-study units, a total of 225 participants, with additional living accommodations for 10 to 15 visiting faculty or lecturers. It will have adequate classroom space for the conduct of three to five separate training programs concurrently.

This self-contained plant will have health/recreation facilities, an auditorium, a learning resource center, kitchen/dining facilities, administrative/staff office space, appropriate storage facilities, and automobile parking areas.

This training complex will be designed to permit adjacent facilities for two separate and distinct schools. One will be dedicated to the training and development of high-level government executives, primarily at grade levels of GS-16 and above, or equivalent. The other school will be devoted to the training of mid-level managers. Some facilities will be shared, but the distinct identities of the two major programs will be preserved.

2. Authority

Executive Order 11315, signed by the President on November 17, 1966, established the Executive Assignment System, and directed the Civil Service Commission to recommend to the President a program for the development and training of persons receiving career executive assignments, including the establishment of special training and educational facilities.

On April 20, 1967, the President signed Executive Order 11348, providing

establish a center for advanced study for upper echelon career executives, a center offering intensive courses focused on areas of vital importance to the administration of Federal programs.

Pursuant to this authority, the Federal Executive Institute was established at Charlottesville, Virginia in October, 1968.

In 1971, the Office of Management and Budget, in collaboration with the Civil Service Commission, established the essential outlines and basic elements of a Federal executive and management development program for high-potential managerial candidates in grade levels of GS-13 and above. An essential part of this program includes formal training for both mid-level managers and supergrade executives.

On April 9, 1974, Chairman Hampton, Vice-Chairman Spain and Commissioner Andolsek approved a proposal by CSC Executive Director Rosen to proceed with plans for a co-located Federal Executive Institute and mid-level management seminar facility, with separate direction and programs, but with some sharing of staff and physical resources.

It is the Civil Service Commission's determination that an expanded facility, to accommodate both the Federal Executive Institute and a newly-established mid-level management training center, is mandatory for the accomplishment of the aims and purposes of the Federal Government's executive and managerial development program, and for continued implementation of Executive Order 11315 and 11348.

3. Justification

a. The need for a new facility

The Federal Executive Institute, a facility for graduate level training of supergrade managers, was established by the Civil Service

Virginia, six years ago. Although the interim location, the Thomas Jefferson Inn, has proven generally satisfactory as a temporary site, the need for an enlarged, permanent facility has been apparent for some time.

In addition to a new physical plant for the FEI, there is a growing need for a mid-level management training center within a reasonable distance of Washington. To achieve needed flexibility in both training programs as well as certain economics resulting from shared facilities, services and equipment, it is proposed that the FEI and mid-level management training center be jointly established in the same physical complex.

The annual increase in new supergrade managers during the last quarter of this century is conservatively projected at 1.5 percent (although for the past nine years it has averaged 3 percent). In FY 1973, there were 719 new supergrade managers. By the beginning of FY 1980 this group can be expected to number 860, 1000 in FY 1990, and 1225 by FY 2000.

In addition to the new supergrade manager population, however, there are other categories which are expected to contribute substantially to the FEI student potential, including the backlog of supergrade managers who have never attended the FEI (expected to number 3,000 by 1980), State and local government managers, FEI alumni for whom "booster shot" training is desirable, and the growing number of managers among women and minority groups.

The present FEI facility, with a maximum capacity of only 63 participants, is clearly inadequate in size to meet the needs of this growing number of potential participants in the last two decades of this century.

Furthermore, the present physical plant does not lend itself to expansion

heating, cooling and plumbing systems would necessitate complete replacement if expansion were attempted.

Existing facilities, adequate to serve as a permanent home for the FBI, are not available in the Charlottesville area, either on or off the university campus. Therefore, new construction is proposed.

In selecting a location for the proposed facility, the following criteria should be met:

- 1) A distance from Washington, D.C. of at least 75 miles, and no more than 250 miles.
- 2) Adequate access by highway and public transportation.
- 3) Proximity to the resources of a major university.
- 4) A self-contained retreat environment.
- 5) Immediate availability of high-quality medical and dental services.
- 6) Proximity to a variety of business services and public recreational facilities.

b. The advantages of co-location

An expanded multi-purpose facility will provide the flexibility needed to meet unknown future needs in the 1980-2000 period. A smaller facility would not only inhibit program innovations, but result in higher costs should program changes become imperative due to factors unforeseen or unforeseeable now.

Co-located facilities will permit the establishment, close to Washington, of a mid-level managerial training center, which will benefit from the resources of the FBI, the University, and the Washington area. As previously mentioned, this mid-level facility will present a much-needed

developmental opportunity for GS-14's and GS-15's and high potential GS-13 managers and, eventually, promote the development of a continuum of training

In addition to program flexibility, a joint facility will permit operational economies not possible in single purpose facilities. Administrative services will be shared, as will many physical facilities: auditorium, library, audio-visual equipment, kitchen, recreational and health facilities. Some sharing of faculty and part-time professional resources, such as guest speakers, will also be possible. The greatest economies, however, will probably be realized in later years, with dimensional as well as quantitative changes in training needs at various management levels, changes which are unidentifiable now, but which will undoubtedly occur.

c. The desirability of the Charlottesville, Va. site

The proposed site is within an optimum distance from Washington, the largest single source of participants. It is close enough to permit utilization of Washington area academic and cultural resources, and to allow travel from Washington without excessive expenditures of time or funds.

At the same time, Charlottesville is far enough to discourage Washington area residents from commuting from their homes or occasionally visiting their offices. This is essential if participants are to observe the continuity of training schedules (which often include early morning and late evening activities) and if they are to be completely detached from normal job responsibilities throughout this intensive educational experience. Frequent home and office visits would both diffuse and diminish this experience.

Access to Charlottesville from Washington, D.C. and other major east coast metropolitan centers is excellent. It is on major east-west and north-south highways, and offers good public transportation in various modes. Bus and train service to and from Washington is especially good.

d. The superior advantages offered by the University of Virginia campus

The FEI must be located at or near a major academic institution, one

disciplines. Such a location is also highly desirable for the proposed mid-level training facility. Proximity to a major university is essential in providing a wide range of academic and cultural resources not found in other settings, and in furnishing a rich educational resource base to supplement the relatively small FBI staff. It is important also that an intellectually stimulating environment be provided for both faculty and student body. Faculty interaction with the university is essential to test the relevance of its work and to maintain its own performance at a sufficiently high quality level. And exposure of the individual course participant to a university's dynamic, stimulating environment and varied resources is highly important in motivating his development as an executive beyond the five or six-week training course, and thus is a key element in the success of this unique educational experience.

The University of Virginia, with its nationally prominent graduate schools, offers such an invigorating academic climate. Its schools of greatest relevance to the training of Government executives are especially outstanding: The Law School, the Graduate School of Business Administration, and the Department of Government and Foreign Affairs. The University's established reputation and continued dedication to excellence in this academic area has been manifested in its long and mutually beneficial relationships with the Army Judge Advocate General School (a new facility for which is now under construction on the university campus) and with the FBI. With a faculty of 1,450, a student enrollment of 13,750, an outstanding library, and a University Press which is one of the nation's leading scholarly publishing houses, the University of Virginia's prestigious academic position

An additional advantage offered by the University of Virginia is its ability and willingness to host the proposed training center, to provide optimum quality land for its construction, and build the facility under a long-term lease arrangement. We have received no indication of similar interest from any other major university. The University of Virginia is in a strong financial position and commands access to bond financing at lower than average interest rates. In determining the rental cost for the facility, the University will not factor in the cost of land, and will not have to recover a profit or money for property taxes.

In addition, however, this university offers one advantage which no similar institution can duplicate: A collaborative relationship with the FEI which, by the time the proposed new facility is occupied in 1976, will have existed for ten years. The University of Virginia has demonstrated not only a superior ability to meet the FEI's numerous requirements but a willingness and commitment to meet, or assist in meeting these needs. University services to the FEI have been provided either cost-free or at nominal cost to the Government. This ten-year partnership constitutes an invaluable investment of coordinated effort which could not be replaced for several years, were another site to be chosen.

The proposed new facility will be a part of a high-quality, prestigious professional school campus now being developed by the University of Virginia, which will include the Graduate School of Business Administration, the Law School, and the Judge Advocate General School. This is an especially opportune time for establishment of the Federal Executive Institute and Management Training Center at this location, since its construction can be

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coordinated with the University's long range plans for this professional campus. The University has agreed to set aside needed acreage for this purpose if a decision on construction can be reached soon.

A self-contained retreat atmosphere is essential to academic achievement of the quality desired at the proposed training facility. Although adjacent to the other graduate-level schools on the professional campus, and within easy walking distance of the business section of the community, the proposed facility will be set apart and secluded from both, through a combination of natural landscape features and careful planning by the University.

e. Medical, dental, business and recreational services

The executive age group requires availability of a broad range of emergency and other medical and dental services, and their standards of medical care are also more demanding than the average. During the past six years, FEI participants have been treated for everything from minor sprains to cancer and heart ailments at the University of Virginia's medical facility and all of our experience with this excellent facility has been satisfactory.

A variety of business services should be readily available to course participants: barber and beauty shops, dry cleaners, service stations, and retail stores of various kinds. All of these are within easy walking distance of the proposed training center's site.

A wide range of recreational opportunities should be available to course participants. Although some recreational facilities will be incorporated into the training center itself, such as swimming, handball, etc., these must be supplemented by others outside the training center. The

variety of leisure time activities, including golf, bowling and other participant sports, live theater, motion pictures, spectator sports, lectures, concerts and art galleries.

* * * * *

The University of Virginia is the only prospective site within an optimum distance from Washington which meets all of the requirements or which offers all of the advantages delineated above. The FEI's experience has verified the judgments made six years ago and have proven the wisdom of the original site selection in Charlottesville. The University of Virginia presently has land of optimum quality on its campus which it is prepared to make available for this purpose, and the financial resources to meet CSC requirements at a reasonable cost to the Government.

This unique combination of advantages appears to dictate the selection of the University of Virginia campus as the site for the proposed training facility.

B. SITE

1. Locale

The proposed facility location is on the campus of the University of Virginia, Charlottesville, Virginia.

Charlottesville is located in the central part of Albermarle County about 115 miles south of Washington, D. C. and 18 miles from the Blue Ridge Mountains. (See Exhibit 1, Area Map.) Charlottesville has a population of about 40,000, about half the county total. The Charlottesville area is historically associated with the homes of three Presidents, James Monroe, James Madison and Thomas Jefferson, the latter of whom founded the University of Virginia and established the initial architectural style of the university buildings.

The site is located north of the University mall at the Copely Hill campus, the new center for professional and graduate education. (See Exhibit 2, Site Map.) The area selected is near the new Judge Advocate General School, the new Law School and the new Graduate School of Business, about 3/4 mile from the existing Federal Executive Institute.

The location is within close walking distance of the Copely Hill campus and a nearby regional shopping center, while being secluded from both.

2. Access

Vehicular access to the site will be from the northeast, off of Barracks Road, a major arterial connection between US Route 250A and Emmet Street. While no direct connection to Route 250A with Barracks Road now exists, a ramp at the northern corner of the site is planned by the

Utility access will be from Barracks Road to the northeast or from the graduate school campus area to the south.

Pedestrian and bicycle access is readily available from all directions if proper terrain and vegetation modifications are made.

3. Topography

The site topography is characterized by a creek drainage fed from a small man-made lake to the west near Route 250A and from a spring to the south. The creek flows easterly and bisects the site by turning northeasterly. The terrain slopes from higher elevations on the perimeters of the site down to the streambed. Elevations vary from 514 feet MSL to 452 feet MSL. A ridge exists along the southeast border of the site running southwest to northeast. The opposite side of the site across the creek slopes more gently up to Route 250A. Abrupt changes in contour are not apparent. (See Exhibit 4, Topography Map.)

4. Soil

No borings or soil tests have been made. Previous construction in the general area indicates that the soil is basically stable and has adequate bearing capacity for spread footings. Clay is evident in excavated areas near the site with signs of lenses of blue micaceous clay and bedrock intrusions within six feet of the surface at random locations. Detailed borings and tests should be made prior to design of structures and utilities to minimize the potentially negative effects of the sub-surface conditions.

5. Utilities

Electrical power is supplied by Virginia Electric Power Company. The University will submeter and charge the government in a manner to be

Water and sewer service will be supplied by the City of Charlottesville. Connections are to be made at Barracks Road.

Storm drainage can potentially be handled by the creek. However, consideration should be given to the effects of increased runoff as a result of modifying the absorption characteristics of the watershed which might adversely affect the downstream 100-year flood plain. Also the pollution impact on the water quality of the creek should be investigated before the storm drainage system is designed.

Natural gas supply has been limited at the University. However, if its use is required, supply will probably come from the public utility service on Barracks Road.

6. Vegetation

The site is heavily wooded, principally with yellow pine and second-growth oak in most areas, with a small grassy glen downslope in front of an existing residence. The ground cover elsewhere is thick brush consisting of blackberry bushes, poison ivy and various other weeds.

7. Climate

The Blue Ridge Mountains are on the western edge of the county, but several smaller mountains and mountain ridges, separate from the Blue Ridge, help make the topography of the county vary from rolling to quite steep. Elevations range from about 300 to 800 feet except up to 3,200 feet in the mountains.

The climate of Charlottesville is modified continental, with mild winters and warm and humid summers. The nearby mountains to the west, and Chesapeake Bay and the Atlantic Ocean to the east, are major factors controlling the

continent. The mountains produce various steering, blocking and modifying effects on storms and air masses. The large open bodies of water, which are slow in reacting to atmospheric changes, contribute to the humid summers and mild winters.

Mean annual temperatures at Charlottesville vary slightly from year to year but average about 57 degrees, which may be different at nearby stations mainly due to differences in elevation. Rather cool similar temperatures prevail during the cold season and rather warm similar temperatures prevail during the warm season, with the spring and fall temperatures showing the upward and downward trends. May and September are usually warm, each having an average of a few days with the temperature greater than or equal to 90. Daytime highs during the cold season are usually in the upper 40's with nighttime lows in the upper 20's. Maximum temperatures around 80 and minimum temperatures near zero are the extremes during the winter season. Daytime highs during the summer are usually in the middle and upper 80's and nighttime lows in the upper 60's. Maximum temperatures up to 107 and minimum temperatures around 50 are the extreme during July and August.

The number of days with the temperature greater than or equal to 90 has ranged from 12 in 1962 to 61 in 1941. The maximum temperature is below freezing on an average of 11 days each year. The temperature falls below freezing from 20 to 23 days a month during the winter, but has not reached zero during the last 30 years.

The growing season, defined as the period between the average date of the last freezing temperature in spring (April 9) and the average date of the first freezing temperature in fall (November 6), is 211 days. Freezing temperatures in spring have occurred as late as May 10 and as early in fall as October 19. This growing season is long enough to allow proper maturity of a large variety of crops.

Elevation, air drainage, soil characteristics, night radiation, and type of air mass are some of the factors controlling the minimum temperature, sometimes causing large differences in short distances.

Precipitation is well distributed throughout the year, with the maximum in July and the minimum in January. During this 30 year period, monthly amounts vary from less than 1 inch up to 16.96 inches during September, 1944. The highest daily total of eight inches occurred during the same month. Rainfall in summer is due mainly to showers and thunder-showers. Forty to forty-five days each year have thunderstorm activity, which is about average for the state. In winter, some of the precipitation usually occurs as snow. The average is $22\frac{1}{2}$ inches a year but yearly amounts are extremely variable, ranging from almost none to over 50 inches.

Southwest winds predominate but during the cold months the winds are mainly from the north to northwest. A secondary maximum frequency from a northerly direction is present in most other months, generally reflecting the progression of weather systems across the state. Relative humidity varies inversely with temperature, being high in the morning and low in the afternoon. Average values are near 80 early in the morning, dropping to near 50 in the afternoon. Cloudiness is least in fall, averaging less than five-tenths coverage, and greatest in winter, with over six-tenths coverage. Partly cloudy days are most frequent in summer with above 40 percent of the days in this category.

Hurricanes and other tropical disturbances occasionally move far enough inland to affect Charlottesville and the surrounding areas. They have generally lost their identity as hurricanes by this time, and the remaining

low pressure centers, in conjunction with the mountains, usually produce heavy rains and occasionally strong winds. Tornadoes are infrequent in

Albemarle County with only a few occurring in Virginia each year.

Thunderstorms, accompanied by severe lightning, high wind and hail, are more frequent and produce the greatest amount of storm damage.*

8. Adjacent Influences

Perhaps the largest influence is the large regional shopping center along Emmet Street to the southeast of the site. This enterprise induces heavy traffic flow on Barracks Road and the attendant problems resulting from a heavy concentration of people within a limited area. Appropriate buffer zones should be established between the facility and these influences to insure the quality of experience desired on the site.

A similar influence will come from the traffic on Route 250A to the northwest of the site. This may be further intensified if and when the proposed ramp on Barracks Road is constructed. Here again, planned buffer zones will be essential.

Influences to the west are generally compatible with the contemplated use of the site, although the visual impact of the Copely Campus buildings will require consideration.

The access drive to the Copely Campus from Emmet Street should not be connected with Barracks Road through the site, because of the potential volume of traffic flow that would be created by public use of this road as a "short-cut" to downtown Charlottesville from outlying regions.

Another influence is the existing residence in the central portion of the site. While this structure is of no apparent historical or architectural significance, its future disposition should be given appropriate study.

9. Zoning

The site is zoned for public use as determined by the University.

The areas to the northeast and southeast have been zoned commercial. Other adjacent areas are zoned for public use (university) and generally the areas beyond are residential. (See Exhibit 5, Zoning Map.)

C. DESIGN CRITERIA

1. Objective

The primary focus of the design criteria is to provide for the required spaces, adjunct facilities, and services which incorporate their functional inter-relationships in such a manner that the objectives of the institute are best served. The design should be pursued in a manner which will serve human needs, be highly cognizant of the human scale, and thus enhance the spirit and purpose of the training facility.

2. Expansion

The initial planning shall include provisions for future expansion should this need arise at a later date. This expansion should be indicated in a manner which will tend to maximize land use within the basic parameters of the design concept.

3. Flexibility

Where feasible, the buildings shall be designed to adapt readily and economically to potential changes in functional requirements. A modular or systems approach should be considered whereby activities can easily be moved or altered, equipment economically interchanged and services systematically distributed.

4. Materials

Interior and exterior materials must clearly meet the requirements of safety, economics, low maintenance, performance, durability and aesthetics. Generally, the separate functional building forms can best be bound into a cohesive architectural statement by the use of a few well-chosen materials

to form the spacial envelope.

Windows and/or skylights should be equipped with sun control devices where appropriate. Care must be taken in locating glazed surfaces to prevent development of inefficient wallspace, poor interior arrangements and glare at work surfaces. Direct sunlight reflecting from certain surfaces may cause shadow reversal, making visual tasks difficult.

Most spaces will require extensive use of sound absorbent materials, e.g., carpeting; acoustical plaster, partitions, and/or tile; draperies, etc. In areas where sound transmission is critical, additional control measures must be taken.

5. Mechanical

The mechanical system must be designed to meet the immediate demands of the facility and also be adaptable to potential future expansion. Maintenance requirements should be minimized and simplified; access for service and repair should be facilitated. The equipment, including the distribution systems, must be adequately isolated and insulated to prevent noise and vibration transmission to adjacent areas. All systems and materials must be designed in accordance with applicable codes.

The heating and air conditioning system may be central, individual or a combination of both. An analysis, to determine the relative feasibility of various options, should be made before adoption of the final design. This analysis should include investigation of alternate fuel sources, their cost and availability. A climatological summary is included in Exhibit 6, Climatological Data.

6. Fire Control

Detection is an important aspect of fire prevention and control. Detection should be approached from the standpoint of variety and depth of means tailored to meet the potentials of the situation. Early, incipient detection such as products of combustion detection should be combined with rate of temperature rise, flame or smoke detection to form a back-up system. Smoke detection should be provided within the mechanical system (if used) with the ability to shut down fans and close fire dampers. A central master control panel with separate building panels should be readily accessible to firemen with visual display to pinpoint trouble spots and provide for testing.

Other equipment, e.g., hoses, sprinklers, multi-purpose dry chemical extinguishers and fire hydrants shall be provided as required. Where hoses are used, provide fog nozzles to reduce impact destruction.

7. Electrical

The exterior electric distribution system shall be run underground throughout the institute complex.

Protection of personnel using the system and operating its equipment is of utmost importance. Design of the system should employ up-to-date devices and techniques adhering both to manufacturer's recommendations and applicable electrical codes.

Lighting levels shall be designed in accordance with current Federal standards. Outdoor areas should be illuminated for security reasons as well as general lighting in parking areas, signs, driveways, pathways and entrances. Emergency lighting should be provided in circulation paths and

stairwells. Exits should have signs that are illuminated at all times, even during power interruptions.

8. Communication

Telephones shall be provided in the administrative offices and the kitchens; telephone jacks will be provided in the training rooms, assembly rooms, and in each living/study unit. Public telephones shall be located throughout the facility. A house music system shall be provided in administrative offices with volume control at each office.

9. Art Work

Artwork shall be an integral element of the design criteria. One quarter to one-half of one percent of the construction cost shall be given to fine arts for either direct purchase or commission.

10. Codes

The following codes govern design practices for this facility; BOCA Basic Building Code/1970, fifth edition; BACA Basic Building Code, Accumulative Supplement/1973; Virginia Uniform Statewide Building Code, Accumulative Supplement/1974.

11. Structural

Structural design loads including wind loads shall comply with the latest edition of BOCA.

<u>Floor Live Loads</u>	<u>P.S.F. (Minimum)</u>
Administrative Offices	50
Residence Buildings	40
Kitchen	100
Dining Rooms	100

<u>Floor Live Loads (con't.)</u>	<u>P.S.F. (Minimum) con't.</u>
Assembly Rooms	100
Seminar Rooms	100
Storage	125
Corridors	100
Recreation	75
Auditorium	60
Mechanical Equipment	100
Learning Resource Center: Reading Rooms	60
Stack Rooms	150 Min.
Roof Live Loads	30

The structural system should be conceived to accommodate a systems approach in order to meet the requirements of expansion and flexibility discussed above. Data pertaining to soils characteristics and bearing capacities shall be gathered as part of structural design criteria.

12. Conservation

Prevalence of materials and availability of fuel and power will significantly affect the design approach for this Facility. The use of critical materials and fuels shall be avoided and options for alternate choices exercised whenever appropriate. Consideration should be given to the technology of integrally designed energy saving elements and use materials extensively available and/or those categorized as a renewable resource.

13. Human Values

The quality of design in terms of human values includes and extends

beyond the objective stated above. The design should be so conceived to maintain the integrity of the site, that is, minimize land modification and major vegetation removal at the building site. It is recognized that vehicular access for both service and parking will be required but should be sensitively handled. Continued concern for the physically handicapped should be expressed in the landscaping whereby the design will allow for maximum maneuverability of wheelchairs throughout the developed area.

D. SITE DEVELOPMENT

1. Utilities

In general, utilities shall be run underground in common trenches easily accessible wherever possible. Design shall include provision for a minimum of 50% expansion to absorb future needs. Above ground facilities such as meters, transformers etc. shall be designed to minimize the impact on the surrounding landscape and shall be visually unobtrusive.

Access to utilities has been discussed previously under site information. Coordination of utilities shall be carried out between the supplier and the University of Virginia to insure proper design development.

Utility locations should coincide with roads and pathways to facilitate access for repair and modifications.

Materials to be used shall be determined by giving consideration to durability and maintenance as well as low initial costs and transmission losses.

2. Roads, Pathways and Parking

Pedestrian traffic should be given priority over vehicular with separation of the two emphasized.

A network of pathways shall be designed to accommodate foot travel and bicycle travel. Details such as curb cuts and benches should be included in the design. Recognition should be given to persons who will transit the site from one off-site location to another on bicycle and on foot. Facility residents will use the pathways for jogging and bicycle riding as well as strolling and direct walk use. Site amenities, views, and the nature

environment should be wholly integrated with the pathway networks.

Vehicular traffic on-site should be held to the absolute minimum. Perimeter parking lots should be employed at the site boundaries to form a transition/buffer zone and to preserve the natural qualities of the site interior. Parking areas should be broken and screened by vegetation to lessen their impact. Cross traffic with pedestrian paths shall be avoided as much as possible. Signs and lighting shall be conservatively employed.

Roadways should be minimal and designed so as not to intrude into the site environment any more than is absolutely necessary. Access to and egress from the site by vehicular traffic should be at one location. Design shall include aesthetic values as well as engineering criteria. Infrequent use roads for maintenance and supply vehicles required to penetrate the site interior can be incorporated with the pathway network if safety is not compromised.

3. Landscaping

The natural character of the site shall be maintained. Planting should be functional, easily maintained and should compliment the natural vegetation and topography. The introduction of flowering species would be desirable, preferably perennials. A sprinkler system should be considered. Preservation of existing trees is of utmost importance to maintain the natural qualities of the site.

Grading and other terrain modifications will be necessary but should be designed and executed with enhancement of the existing qualities as the desired result.

The existing creek should be used to full advantage making the psychological effects of water an important aspect of the site design.

Street furniture, lighting, roads and pathways should all be integrated with buildings and landscaping to form an organic relationship between the natural and human environments.

-25-

SPACE REQUIREMENTS

Common Use Facilities

Item No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assignable Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
Item A-1	1. Lectures, special events, educational films, ceremonies, etc. 2. Occupancy: 300 3. Provide service access 4. Primary relationship to training and seminar rooms 5. Acoustical treatment at ceiling and walls - carpeting on floor 6. Provisions for stage lighting, spot lighting and dimming of house lights 7. conventional seating with retractable writing desk 8. Frontal and rear projection - include provision for future rear-screen projection 9. Sound amplification system 10. Toilets, projection & storage	6,000	1	6,000	6,000

-26-

Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assign- able Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
1. Reader space	1,200	1	1,200	
2. Stacks and shelving (5,000 lin. ft.)	3,500	1	3,500	
3. Staff and circulation desk	1,000	1	1,000	
4. Work space, circulation, toilets, mechanical equipment	3,000	1	3,000	
5. Janitor room	50	1	50	
6. 9' minimum ceiling				
7. Soundproof listening & interaction spaces to accommodate from one to four users (9-12 rooms total)				
8. Central desk control of books & activities within the center				
9. Books (up to 40,000 volumes), periodicals & various modes of audio/visual core facility for multi-mode information dissemination				
10. One librarian & two assistants				
11. North light desirable				
12. Central location with expansion possibilities at a future date				

-27-

Item No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assignable Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
13.	Acoustical ceiling, carpets				
14.	Sink in workroom				
15.	Duplication facility for residents' use				
1.	Basketball court w/provision to convert to volleyball (2)	7,500	1	7,500	8,750
2.	Handball (40 x 20 x 20)	800	2	1,600	
3.	Table Tennis/Billiards (4 tables of each)	3,000	1	3,000	
4.	Exercise Room	1,600	1	1,600	
5.	Office	200	1	200	
6.	Swimming pool (50 x 80)	4,000	1	4,000	
7.	Lockers (100 min.), dressing rooms, toilets Male Female	1,500 500	1 1	1,500 500	
8.	Equipment room	200	1	200	
9.	Janitor room	50	1	50	

-28-

Item No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assignable Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
	10. Sports, activity games and physical therapy for participant health improvement & development				
	11. Heated pool for year round use				
	12. Primary relationship to outdoor recreation area and secondary relationship to living/study units - locate on site to isolate noise				
	13. Hardwood flooring in basketball area and handball court				
A-4	1. Office/receiving	150	1	150	20,950
	2. Machine room	300	1	300	
	3. Bundle room	150	1	150	
	4. Facility collection room	600	1	600	
	5. Resident use separated from concession w/provision to pick up or send out personal laundry/dry-cleaning or use self-service (residents only, not for staff use) coin-operated				

-2-

Item No.	Description	Assign-able Area Sq. Ft.	No. Of Units	Net Assign-able Area Sq. Ft.	Total Net Assign-able Area Sq. Ft.
6.	Clean laundry & dry-cleaning storage in bundle area - dirty facility laundry & linen in collection area				
7.	Accessable to delivery truck				
8.	Circulation tie to living area & proximity to recreation				
9.	Provide folding area, iron board & sitting area 2/table & chairs - vending machines				
1.	Mail room	100	1	100	1,200
2.	Message center (FTS line)	70	1	70	
3.	Administrative Officer's office	150	1	150	
4.	Administrative Staff (Supply Officer, Personnel Assistant, Facility Offices, and 3 clerks)	500	1	500	
5.	Secretary/reception area	100	1	100	
6.	Storage	150	1	150	

-30-

Item No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assignable Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
7.	Janitor room	50	1	50	
8.	Toilets	50	2	100	
9.	Reception center for new arrivals & visitors, administration center & business focal point should be easily identified and accessible				
10.	Acoustical ceiling treatment, carpet and appropriate wall treatment				1,220
11.	Adjustable shelving in storage room				
1.	General Storage	3,400	1	3,400	
2.	Shipping/receiving	600	1	600	
3.	Storage for support supplies and equipment				
4.	Loading dock w/delivery truck access				
5.	Provide for future expansion				
6.	Storage shelving, racks & lockable cabinets				4,000

-31-

Description	Assign-able Area Per Unit Sq. Ft.	No. Of Units	Net Assign-able Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
1. Paper supply	50	1	50	650
2. Work room	600	1	600	
3. Production of printed matter by staff and faculty - offset printing capability as well as copying equipment and photo reproduction				
4. One part-time staff member				
5. Easily accessible to faculty and staff offices				
1. Change rooms (Male & Female)	100	2	200	
2. Lounge area	600	1	600	
3. Toilets	50	2	100	
4. A place for concession - employees and outside staff to gather, talk, eat lunch and watch TV. (40 persons)				
5. Outside access to terrace				
6. Related to kitchen				
7. Provide for expansion and possible use as a day care center for inside staff children if others as required				

-32-

Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assign- able Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
8. Acoustical treatment of ceilings and carpeting 9. Lockable clothes lockers in change room				900
1. First aid treatment and examining room 2. One part-time nurse & visiting physician	200	1	200	
3. First aid, and scheduled examinations w/outside physicians 4. Impervious finishes on walls, vinyl or seamless flooring				
5. Laboratory casework & storage units - hospital sink unit				200
1. Loading dock	100	1	100	
2. Garbage can storage & cleaning	60	1	60	
3. Dry food storage	1,200	1	1,200	
4. Walk-in refrigerator	150	1	150	

-33-

Description	<u>Assignable Area Per Unit</u> Sq. Ft.	No. Of Units	<u>Net Assign- able Area</u> Sq. Ft.	<u>Total Net Assignable Area</u> Sq. Ft.
3. Walk-in freezer	150	1	150	
6. Janitor	100	1	100	
7. Linen storage	50	1	50	
8. Dish and pot washing	300	1	300	
9. Food Prep. & serving	1,500	1	1,500	
10. Dish/utensil storage	200	1	200	
11. Dining room (100 persons)	1,800	3	5,400	
12. Private dining area (10-12 persons)	300	2	600	
13. Toilets	50	2	100	
14. Dining rooms subdividable into 50 person dining rooms				
15. Sit down dining with waiters serving				
16. 4 cooks, 6 helpers, 2 dishwashers, 16 waiters				
17. Exterior views w/possible exterior assembly area				
18. Service access for delivery trucks				

-34-

Item No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assign- able Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
	19. Potential use for group meetings between meals 20. Central location w/future expansion 21. Acoustical ceilings & carpet in dining impervious surfaces in kitchen 22. Rheostat control on dining room lights 23. Vent hoods in kitchen 24. Built-in storage shelves in dry storage (36" deep) and for dish/utensil storage 25. Kitchen equipment including: a. Walk-in refrigerator & freezers b. Steam kettle c. Stack ovens (2) d. Vegetable peeler e. Griddle f. Stoves & ovens (2) g. Vegetable sink h. Baker's sink & tables (2)				

-35-

Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assign- able Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
i. Cook's sink & tables (2) j. Pot racks k. Mixer l. Toaster m. Ice dispenser n. Coffee Urns, Juice & water dispenser o. Dish, glass & cup autolifts p. silverware storage q. Hot & cold pass through r. Baker's storage s. Dishwasher t. Rinse Unit & disposal u. Pot sinks v. Refrigerator				9,910

-36-

No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assign- able Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
A-	1. Maintenance office	150	1	150	
	2. Workshops	300	2	600	
	3. Toilets & lockers	100	1	100	
	4. Trash collection area	400	1	400	
	5. Storage	750	1	750	
	6. Shipping/receiving	300	1	300	
	7. Gardening	200	1	200	
	8. Central area for facility maintenance				
	9. 6 maintenance personnel				
	10. Accessable to service trucks and delivery vehicles				
	11. Close proximity to main drive				2,500
A-	1. Central location of plant facilities & utilities throughout site - may be broken up into sub-plants at different locations throughout site.				

Item No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assign- able Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
	2. Access to utility sources and service roads 3. All mechanical equipment required to service facility - includes electrical, water, natural gas (and other fuels) and sewage 4. Provide for 50% future growth				11,000
	Total Net Assignable Area				67,280
	Net Assignable to Gross Ratio: 40%				
	Total Gross Area, Common: <u>94,180 Sq. Ft.</u>				

2. Executive Program Facilities

Approved For Release 2000/08/10 : CIA-RDP86-01019R000200090004-1					
No.	Description	Assignable	No. Of	Net Assign-	Total Net
		Area Per Unit		Units	able Area
		Sq. Ft.		Sq. Ft.	Sq. Ft.
1.	Living/sleeping	235	146	34,310	
2.	Closet	15	146	2,190	
3.	Bath	50	146	7,300	
4.	Design for study, sleeping, small group conversations				
5.	Intertie with multi-mode information dissemination from learning resource center				
6.	Integrate with training rooms and faculty offices				
7.	Unit occupancy be either sex				
8.	All units with exterior exposure, decks and balconies accessible from rooms				
9.	Provide covered access to training rooms and faculty offices				
10.	Closely related to lounge, secondarily to training rooms and faculty offices				
11.	Living/study units preferably clustered in group units of six to nine with common lounge				
Approved For Release 2000/08/10 : CIA-RDP86-01019R000200090004-1					

-39-

Item No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assignable Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
	12. Provide maximum individual privacy 13. Acoustical ceiling treatment except in bath-paneling, fabric and/or paint on walls, tile walls and floor in bath - carpeting in remainder of space 14. Provide lighting at bed, desk and sitting area 15. Provide individual temperature controls for heating and air-conditioning 16. Windows shall be operable (may be opened to permit fresh air in) 17. Provide tub/shower combination in bath 18. Furnishings shall include suitcase storage in closet, built-in desk with bookshelves for 30-40 books, built-in storage drawers and closet for hanging clothes 19. Communications equipment shall include provisions for: video tape cassette play-back unit, low power broadcast reception, TV cable (local origin channels), telephone jacks (rental phone use), radio 20. Six units to have capability to convert to two-unit suites by use of inter-locking doors.				43,800

Item No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assignable Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
B-2	1. Common space to serve six to nine living/study units 2. Primary function to serve for small group meetings and quiet recreation 3. Designated area designed to optimally serve six to nine persons, mixed sexes 4. Location shall be adjacent to typical living/study unit cluster 5. Acoustical ceiling, panelling, fabrics and/or paint on walls, carpeting on floor 6. General area lighting with dimmer control 7. Kitchenette accommodation	225	24	5,400	
B-3	1. Activity area for lectures, audio-visual presentations, conferences, etc., includes storage space 2. Occupancy designed for maximum of 75-100 persons, with provisions for subdividing into smaller units 3. Primary access will be from exterior space 4. Orientation shall be in and/or towards quiet zone	2,750	3	8,250	5,400

Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assignable Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
3. Acoustical ceiling, panelling, cork, fabric and/or painted walls, carpeting on floors 6. Provisions for audio-visual frontal and rear projection blackboard, speaker amplification, with TV and video tape capability 1. Functional space for small group meetings and work sessions, includes storage space 2. Designed for optimal occupancy of 20-30 persons 3. Spaces adjoining or in near proximity of the training rooms with preferred access from exterior space 4. Orientation shall be in and/or towards quiet zone 5. Acoustical ceiling, panelling, cork, fabric and/or painted walls, carpeting on floors 6. Speaker, light dimming and projection controls 7. TV and video tape capability in four of these units	600	18	10,800	8,250
				10,800

Item No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assignable Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
B-5	Group congregating areas during breaks in meetings and work sessions: 1 per each training room 1 per six seminar rooms	375 375	3 3	1,125 1,125	
	Men/women toilets at each assembly area	50	12	600	
	Locations will be either immediately adjoining training rooms or centrally located in clusters of six seminar rooms				
	Acoustical ceiling, durable wall finishes, carpeting on floors				2,850
	Private offices for faculty	150	30	4,500	
B-6	Men/women toilets centrally located	100	4	400	
	Offices primarily relate to training rooms, seminar rooms and living/study units				
	Location shall be in and/or towards quiet zone				
	Acoustical ceiling, panelling, fabric, or paint at walls, carpeting on floors				
	Provide bookshelves for 1,500 volumes				4,900
B-7	Director's office	400	1	400	

Item No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assignable Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
1.	Associate director's office	225	2	450	
2.	Administrative officer	200	1	200	
3.	Secretary/reception area	400	2	800	
4.	Production equipment	400	1	400	
5.	Administrative Area, Secretarial Pool	400	2	800	
6.	Storage	300	1	300	
7.	Men/women toilets	50	2	100	
8.	Primary function as core facility for administration of FEL unit				
9.	Planned occupancy for 20 employee student aides				
10.	Plan access from exterior space with strong visual identity				
11.	Acoustical ceilings, panelling, fabrics and/or paint on walls, carpeting on floors. Durable wall finishes in production equipment and storage, tile in toilets, resilient floors				
12.	Total Net Assignable Area				3,450
	Net Assignable to Gross Ratio: 40%				79,450
	Total Gross Area, Executive: 111,230 sq. ft.				

-44-

Management Program Facilities

Item No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assign- able Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
33C-1	1. Living/sleeping	235	94	22,090	
	2. Closet	15	94	1,410	
	3. Bath	50	94	4,700	
	4. Design for study, sleeping, small group conversations				
	5. Intertie with multi-mode information dissemination from learning resource center				
	6. Integrate with training rooms, seminar rooms and faculty offices				
	7. Unit occupancy by either sex				
	8. All units with exterior exposure, decks and balconies accessible from rooms				
	9. Provide covered access to training rooms, seminar rooms and faculty offices				
	10. Closely related to lounges, secondarily to training rooms, seminar rooms and faculty offices				

-45-

Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assign- able Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
12. Living/study units preferably clustered in group units of six to nine with common lounge 12. Provide maximum individual privacy 13. Acoustical ceiling except in bath, panelling, fabric and/or paint on walls, ceramic tile walls and floor in bath, carpeting in remainder of space 14. Provide lighting at bed, desk and sitting area 15. Provide individual temperature controls for heating and air-conditioning 16. Windows shall be operable (may be opened to permit fresh air in) 17. Provide tub/shower combination in bath 18. Furnishings shall include: closet, suitcase storage, built-in desk with bookshelves for 30-40 books, built-in storage drawers and closet for hanging clothes 19. Communications equipment shall include provision for: tape cassette play-back unit, low power broadcast reception, TV cable (local origin channels), telephone jack (rental phone use), radio				

Item No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assignable Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
-2	20. Five units to have capability to convert to two-unit suites by use of interlocking doors 1. Common space to serve six to nine living/study units 2. Primary function to serve for small group meetings and quiet recreation 3. Designated area designed to optimally serve six to nine persons, mixed sexes 4. Location shall be adjacent to typical living/study unit cluster 5. Acoustical ceiling, panelling, fabrics and/or paint on walls, carpeting on floor 6. General area lighting with dimmer control 7. Kitchenette accommodations	225	17	3,825	28,200
3	1. Activity area for lectures, audio-visual presentations, conferences, etc. 2. Storage space for training materials 3. Include provisions for sub-dividing the 3,000 sq. ft. space into smaller units 4. Primary access will be from exterior space	3,000 2,000	1 2	3,000 4,000	3,825

-47-

Item No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assignable Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
4	5. Orientation shall be in and/or towards the quiet zone	600	6	3,600	7,000
	6. Acoustical ceiling, panelling, cork, fabric and/or painted walls, carpeting on floors				
	7. Provisions for audio-visual frontal and rear projection, blackboard, speaker amplification, with TV and video tape capability				
	1. Functional space for small group meetings and work sessions, includes storage space				
	2. Designed for optimal occupancy of 15-30 persons				
	3. Provide for potential combination into two large assembly rooms				
	4. Spaces adjoining or in near proximity of the training rooms with preferred access from exterior space				
	5. Orientation shall be in and/or towards the quiet zone				
	6. Acoustical ceiling, panelling, cork, fabric and/or painted walls, carpeting on floors				
	7. Light dimming controls				3,600

-48-

Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assignable Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
1. Group congregating areas during breaks in meetings and work sessions: 1 per each training room 1 per six breakout rooms	375	3	1,125	
2. Men/women toilet at each assembly room	375	1	375	
3. Locations will be either immediately adjoining training rooms or centrally located in cluster of breakout rooms	50	8	400	
4. Acoustical ceiling, durable wall finishes, carpeting on floors				1,900
1. Private offices for faculty	150	15	2,250	
2. Men/women toilets	100	2	200	
3. Offices primarily relate to training rooms, breakout room and living/study units				
4. Location shall be in and/or towards quiet zone				
5. Acoustical ceiling, panelling, fabric and/or paint at walls, carpeting on floors				
6. Provide bookshelves for 1,500 volumes				2,450

-49-

Item No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assignable Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
3-7	1. Director's office	400	1	400	
	2. Administrative officer	200	1	200	
	3. Secretary/reception	900	1	900	
	4. Reproduction	80	1	80	
	5. Equipment	400	1	400	
	6. Storage	400	1	400	
	7. Men/women toilets	50	2	100	
	8. Primary function as core facility for administration of management training unit				
	9. Planned occupancy for 9 persons				
	10. Plan access from exterior space with strong visual identity				
	11. Acoustical ceilings, panelling, fabrics and/or paint on walls, carpeting on floors. Durable wall finishes in reproduction, equipment and storage, tile in toilets, resilient floors				
	Total Net Assignable Area:				2,480
	Net Assignable to Gross Ratio: 40%				49,455
	Total Gross Area Management: 69,235 Sq. Ft.				

-50-

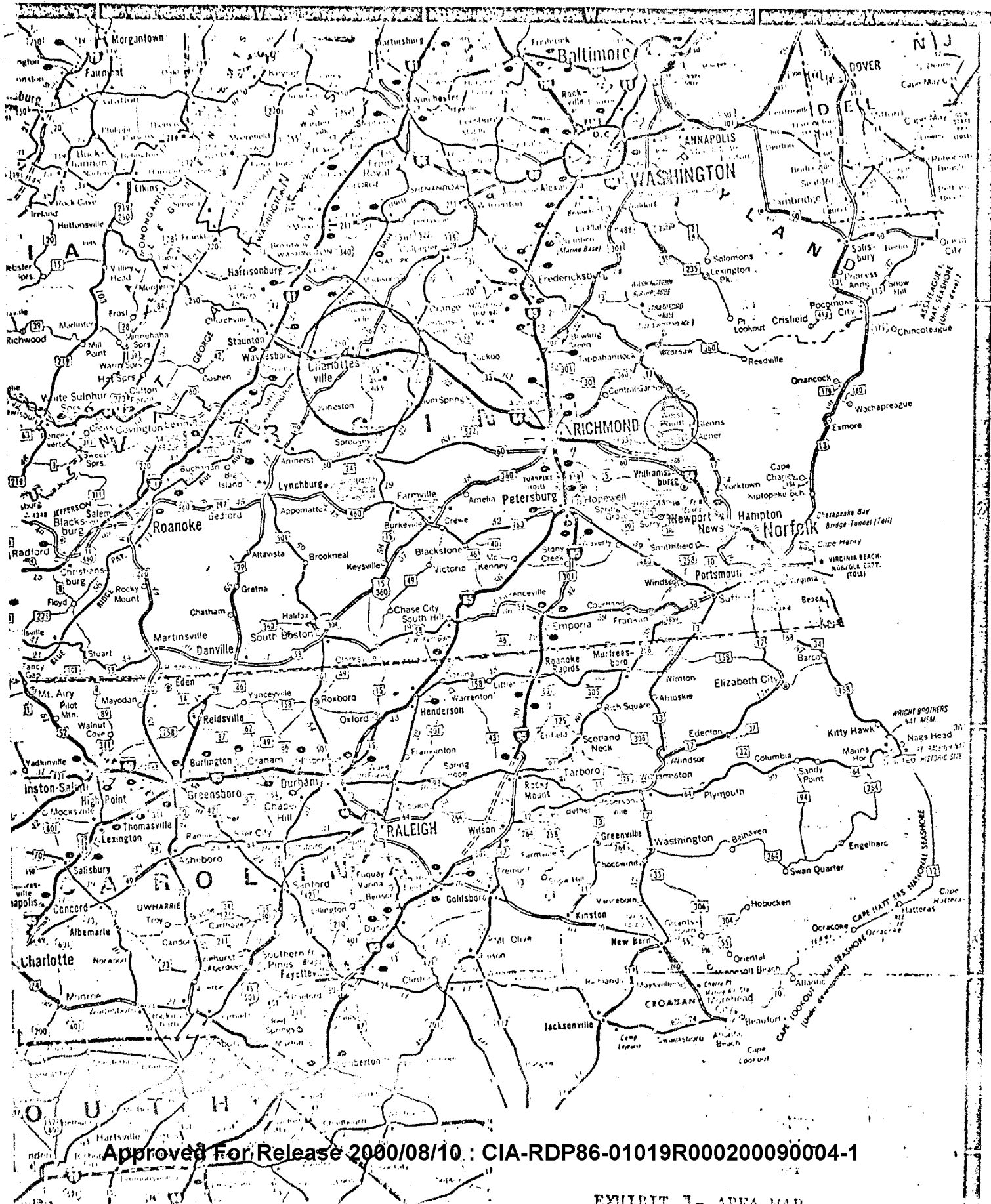
No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assign- able Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
	Totals for Entire Facility:				
	Net: <u>196,185 Sq. Ft.</u>				
	Gross: <u>274,645 Sq. Ft.</u>				

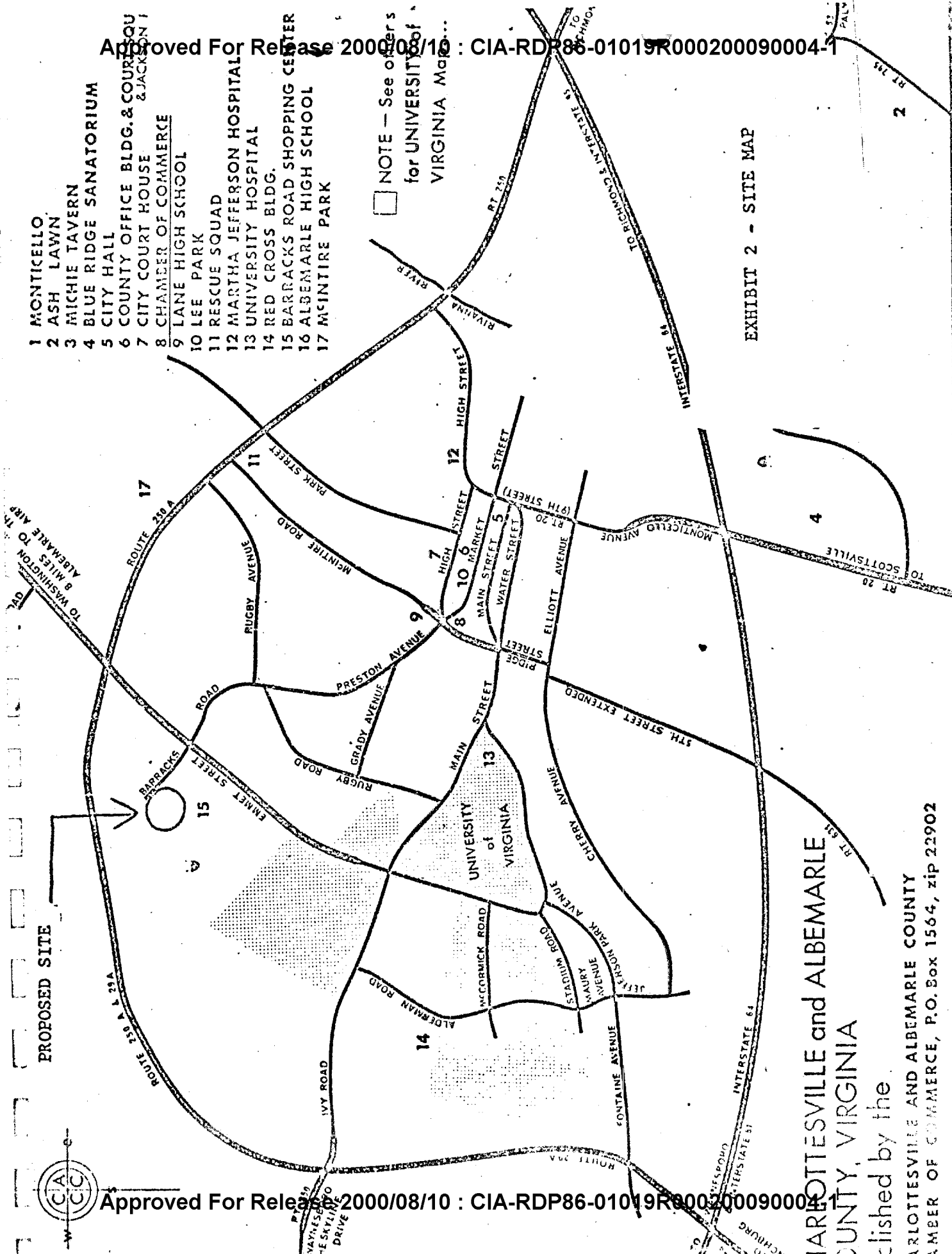
Item No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assignable Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
D-1	1. Volleyball courts (50 x 80)	4,000	3	12,000	
	2. Tennis courts (50 x 120)	7,200	4	28,800	
	3. Horse shoes (10 x 50)	500	1	500	
	4. Putting green (50' dia.)	20,000	1	20,000	
	5. Exterior activity area for participants health improvement & development				
	6. Related to multi-purpose recreation area				
	7. Provide for noise isolation				
	8. Provide for night use				
	9. Use sand/clay surface for volleyball				61,300
D-2	1. Asphalt, concrete and/or masonry walkways and bicycle paths interconnecting various on-site activities				
	2. Provide lighting, street furniture and other amenities				
	3. Can function for infrequent use service vehicle access route				

No.	Description	Assignable Area Per Unit Sq. Ft.	No. Of Units	Net Assign- able Area Sq. Ft.	Total Net Assignable Area Sq. Ft.
3	- Two land maximum width roadways and infrequent use of pathways for service vehicles - Parking for 250 cars in fragmented areas on site perimeter - Future parking expansion for additional 100-150 cars - Spot in parking area with slab and base to permit helicopter landing	77,500	1	77,500	(46,500)
	Total Outdoor Area				77,500
					138,800

F. DESIGN CONCEPT

(To be supplied at a later date)





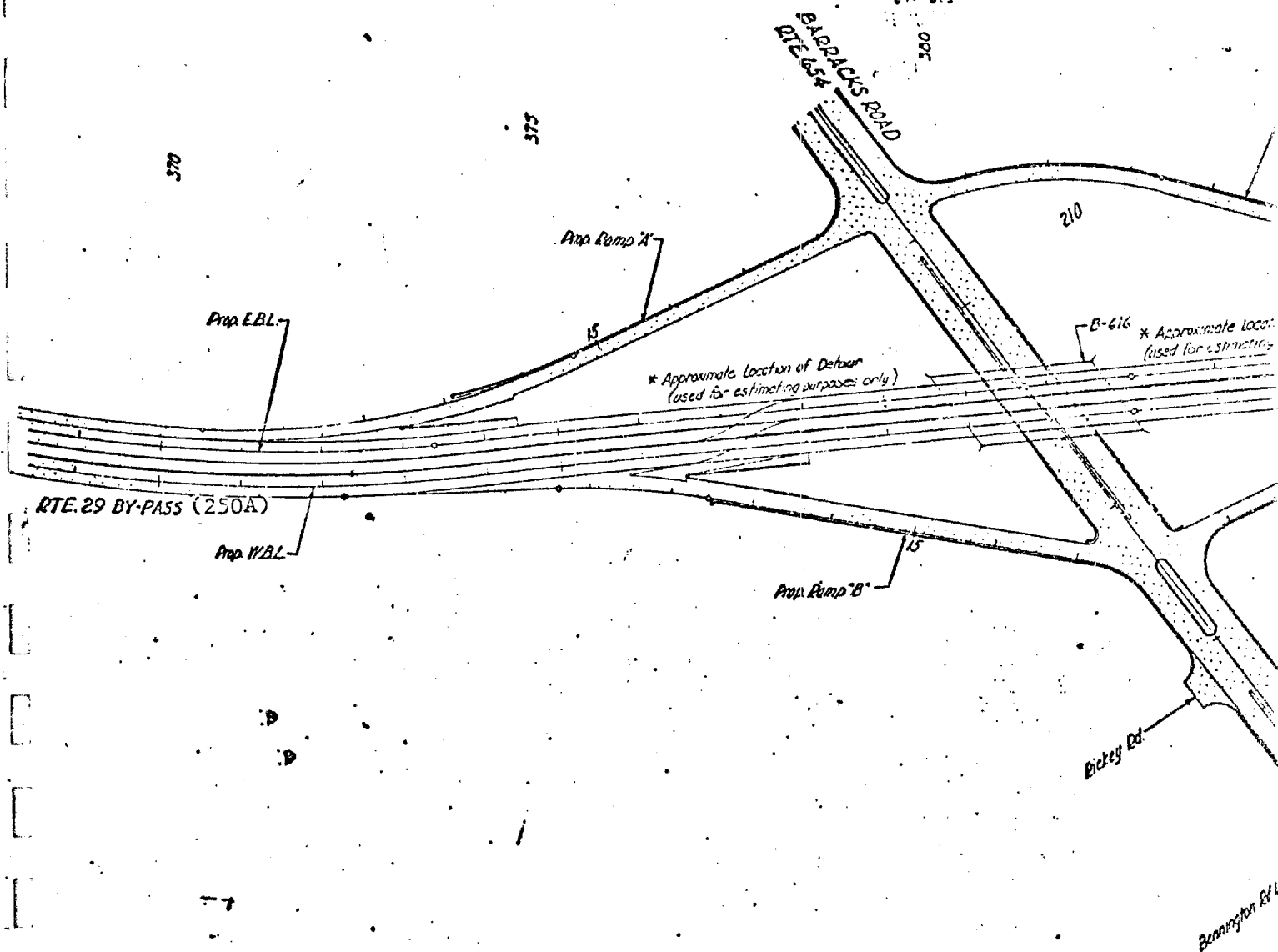
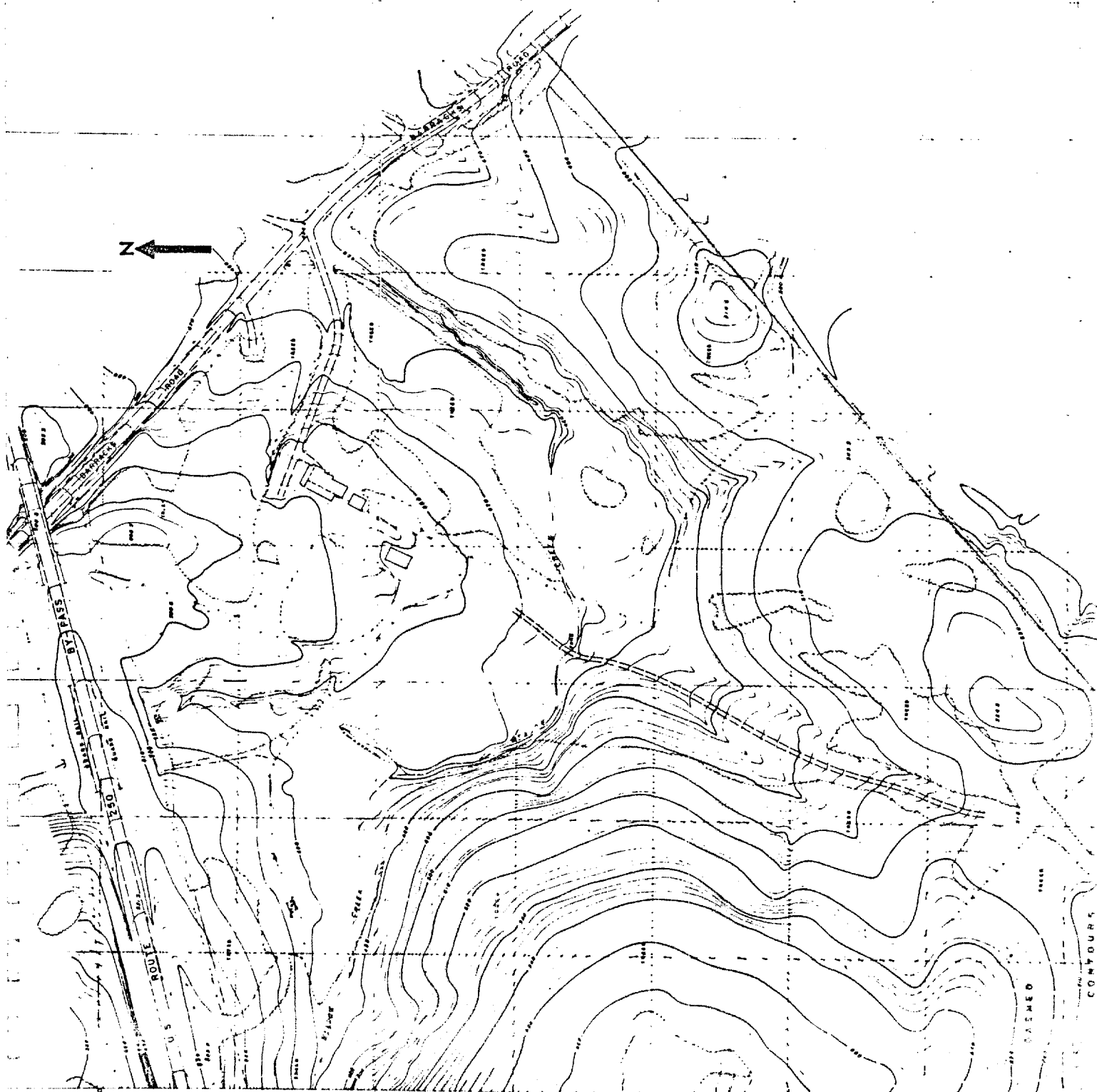
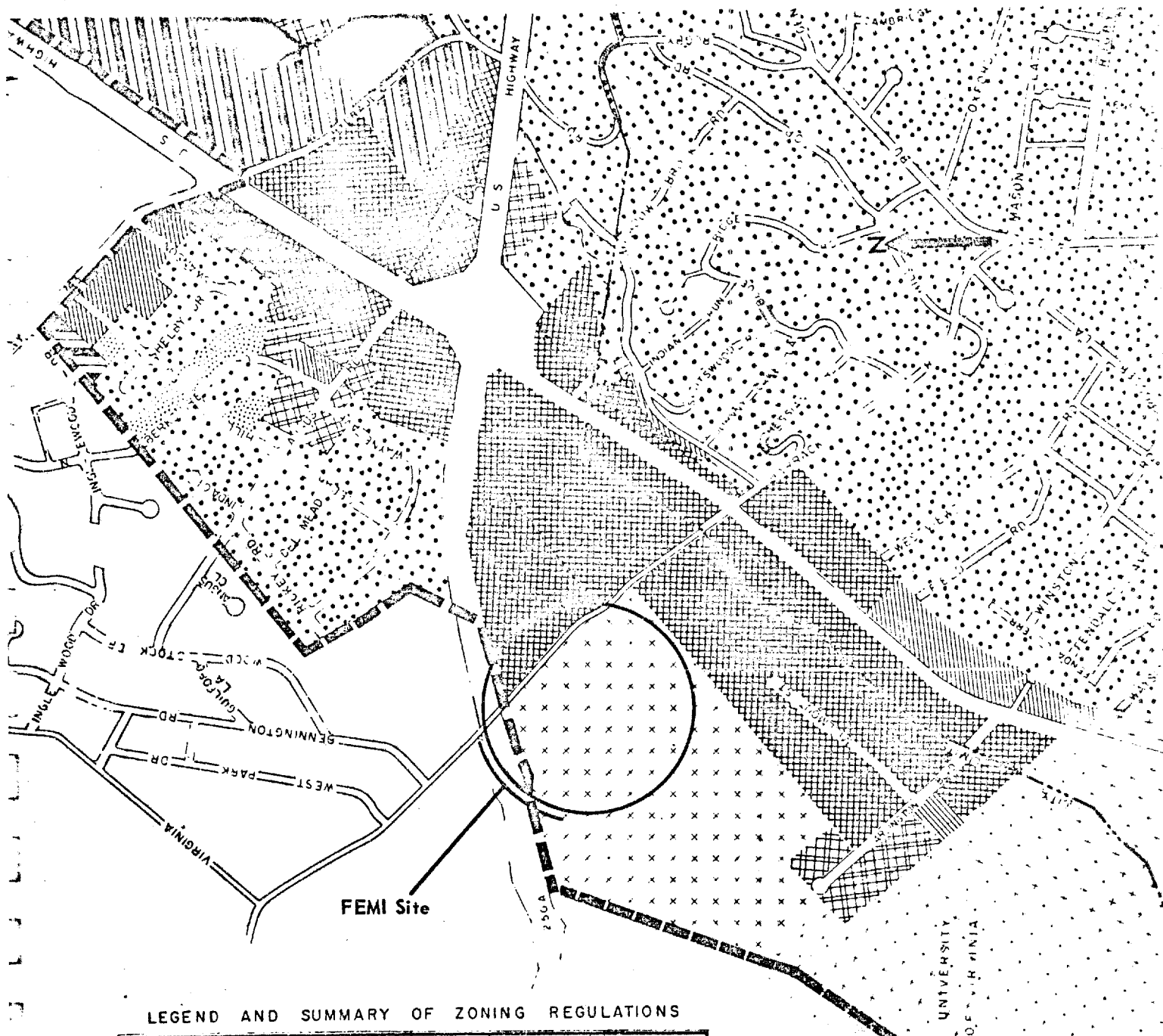


EXHIBIT 3 - PROPOSED HIGHWAY RAMP





LEGEND AND SUMMARY OF ZONING REGULATIONS

DISTRICT	USE	SYMBOL	35	30	10	25	10' 6" x 14'
R-1	RESIDENTIAL SINGLE-FAMILY DWELLINGS, SOFT COURTS PARKS, PLAY AREAS, ETC. (SEE DISTRICT MAP)	[Symbol]	35	30	10	25	8,125 SQ. FT.
R-2	RESIDENTIAL SINGLE-FAMILY DWELLINGS, SOFT COURTS PARKS, PLAY AREAS, ETC. (SEE DISTRICT MAP)	[Symbol]	35	30	10	25	8,000 SQ. FT. AND 7,200 SQ. FT. 5,000 SQ. FT. SINGLE FAM.
R-3	MULTIPLE DWELLING APARTMENTS, CONDOMINIUMS, ETC. (SEE DISTRICT MAP)	[Symbol]	85	25	10	25	1,000 SQ. FT. PER FAM. IN MULTIPLE
B	OFFICE-SHOP OFFICES, SHOPS, ETC. (SEE DISTRICT MAP)	[Symbol]	85	20	8	15	FOR DWELLINGS SAME AS R-3 DIST.
B-1	BUSINESS RETAIL, SERVICE, ETC. (SEE DISTRICT MAP)	[Symbol]	85	20	8	15	FOR DWELLINGS SAME AS R-3 DIST.
B-2	BUSINESS RETAIL, SERVICE, ETC. (SEE DISTRICT MAP)	[Symbol]	85	NONE	6	15	FOR DWELLINGS SAME AS R-3 DIST.
B-3	BUSINESS RETAIL, SERVICE, ETC. (SEE DISTRICT MAP)	[Symbol]	100	NONE	6	15	FOR DWELLINGS SAME AS R-3 DIST.
M-1	RESTRICTED INDUSTRIAL INDUSTRIAL, ETC. (SEE DISTRICT MAP)	[Symbol]	SEE ORDINANCE	10	SEE ORDINANCE		NO DWELLINGS PERMITTED

U. S. DEPARTMENT OF COMMERCE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION,
IN COOPERATION WITH THE WATER RESOURCES RESEARCH CENTER AND THE RESEARCH
DIVISION OF VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

CLIMATOGRAPHY OF THE UNITED STATES NO. 20-44

CHARLOTTESVILLE, VA

LATITUDE 35°02'N
LONGITUDE 78°11'W
ELEV. (GROUND) 870 Ft.

CLIMATOLOGICAL SUMMARY

STATION: _____

MEANS AND EXTREMES FOR PERIOD 1941-70

MONTH	TEMPERATURE (°F)										PRECIPITATION TOTALS (INCHES)																			
	MEANS			EXTREMES						MEAN DEGREE DAYS BASE 65°	MEAN NUMBER OF DAYS				SNOW, SLEET										MEAN NUMBER OF DAYS					
	DAILY MAXIMUM	DAILY MINIMUM	MONTHLY	RECORD HIGHEST	YEAR	DAY **	RECORD LOWEST	YEAR	DAY **		MAX.		MIN.		GREATEST MONTHLY	YEAR	GREATEST DAILY	YEAR	DAY **	SNOW, SLEET				.01 or MORE	.10 or MORE	.50 or MORE	1.00 or MORE			
											60° AND ABOVE	32° AND BELOW	32° AND BELOW	0° AND BELOW						MEAN	MEAN	MAXIMUM MONTHLY	YEAR					GREATEST DAILY	YEAR	DAY **
JAN	44.8	27.1	36.0	79	50	27	2*	70	8	891	0	4	23	0	2.85	5.22	49	1.96	68	14	5.7	29.4	66	10.0*	66	30	9	6	2.0	2.6
FEB	47.0	28.2	37.7	81	54	28	1	58	17	766	0	3	20	0	2.88	5.16	65	2.35	65	8	6.1	21.3	61	12.0	58	16	9	6	2.0	2.6
MAR	55.8	35.3	45.4	89	55	29	7	43	4	598	0	1	13	0	3.93	6.55	52	2.97	67	7	5.7	29.8	60	20.7	62	6	10	7	2.4	2.1
APR	68.3	45.7	57.1	95	50	24	21	50	14	271	1	0	2	0	3.28	6.00	52	3.05	48	1	0.2	3.0	59	3.0	59	13	10	6	2.4	2.1
MAY	76.9	55.1	66.0	100	51	28	32	47	10	82	2	0	0	0	3.90	6.87	48	2.94	62	2	0.0					11	7	2.8	2.9	
JUN	83.5	63.0	73.3	102*	55	30	40	67	1	19	7	0	0	0	3.44	7.79	69	3.83	69	9	0.0					10	6	2.1	2.5	
JUL	87.1	66.9	77.1	104	51	31	54*	52	2	2	11	0	0	0	5.16	9.93	68	4.37	64	13	0.0					12	8	3.4	3.5	
AUG	85.7	65.5	75.6	102	54	1	49	65	29	2	9	0	0	0	4.83	15.24	42	5.38	69	15	0.0					10	7	2.8	2.2	
SEP	79.6	59.2	69.4	107	54	7	34	42	29	41	4	0	0	0	4.19	16.96	44	8.09	64	18	0.0					9	6	2.6	1.1	
OCT	69.4	49.3	59.4	98*	51	7	27*	69	24	207	1	0	1	0	3.44	9.97	42	6.74	61	21	0.0					8	5	2.0	0.7	
NOV	58.0	39.1	48.6	88	50	2	10	50	26	490	0	0	7	0	2.99	6.41	48	3.18	62	10	1.2	10.6	53	10.0	53	7	5	5	2.0	0.7
DEC	46.5	29.2	37.9	79	56	8	5*	67	11	835	0	3	21	0	3.45	7.56	48	3.46	48	4	4.1	17.3	62	16.0	69	26	5	6	2.4	0.5
YEAR	66.9	47.0	56.9	107	54	7	1	58	17	4193	35	11	87	0	44.34	16.96	44	8.09	44	18	22.5	29.8	60	20.7	62	6	116	75	29	11

*Also on earlier dates, months, or years. **Day observation was made.

PROBABILITY OF FREEZES OCCURRING AS LATE IN THE
SPRING OR AS EARLY IN THE FALL AS DATES SHOWN
IN THE FOLLOWING TABLE

PERCENT CHANCE OF LATER DATE IN SPRING	TEMPERATURE LEVELS					
	16°	20°	24°	28°	32°	36°
90	JAN 5	FEB 9	FEB 20	MAR 6	MAR 27	APR 4
70	FEB 5	FEB 21	MAR 4	MAR 17	APR 4	APR 11
50	FEB 15	MAR 1	MAR 12	MAR 24	APR 9	APR 16
30	FEB 24	MAR 9	MAR 21	MAR 31	APR 14	APR 21
10	MAR 9	MAR 21	APR 1	APR 10	APR 22	APR 27

PERCENT CHANCE OF EARLIER DATE IN FALL	TEMPERATURE LEVELS					
	16°	20°	24°	28°	32°	36°
90	DEC 2	NOV 20	NOV 19	OCT 29	OCT 24	OCT 8
70	DEC 11	NOV 29	NOV 25	NOV 8	OCT 31	OCT 17
50	DEC 18	DEC 5	NOV 29	NOV 14	NOV 6	OCT 23
30		DEC 12	DEC 4	NOV 21	NOV 11	OCT 30
10		DEC 22	DEC 10	DEC 1	NOV 19	NOV 8

STATION HISTORY

DATE	LOCATION	ELEVATION	OBSERVER
FEB, 1899 - PRESENT	1.7 MILES W	870	LEANDER MCCORMICK OBSERVATORY

NOTE

Relative Humidity

Annual Average is 68%

Wind Velocity

SW Average 8 MPH

Approved For Release 2000/08/10 : CIA-RDP86-01019R000200090004-1

AVERAGE TEMPERATURE (°F)

MONTHLY AND SEASONAL SNOWFALL (INCHES)

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL	SEASON	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	TOTAL
1	34.3	34.4	40.8	61.5	68.6	73.2	77.7	76.3	73.6	65.3	50.7	42.0	58.2	41-42	0.0	0.0	0.0	0.0	2.7	0.0	6.0	0.0	0.0	8.7
2	34.3	34.7	46.7	60.0	68.5	74.0	76.5	73.6	68.9	59.2	47.4	34.1	56.7	42-43	0.0	0.0	0.0	4.0	5.4	0.2	4.5	0.0	0.0	14.1
3	36.5	38.5	43.4	52.2	67.1	77.7	76.2	78.6	67.2	57.0	47.1	37.7	56.6	43-44	0.0	0.0	0.2	3.0	1.7	0.5	1.2	0.0	0.0	6.6
4	37.8	37.7	41.4	54.1	71.1	74.6	77.7	74.9	68.9	56.6	47.2	33.8	56.3	44-45	0.0	0.0	0.0	0.0	2.3	0.8	0.0	0.0	0.0	3.1
5	31.8	39.2	56.5	58.7	62.4	73.6	76.0	74.7	71.7	58.9	49.5	33.0	57.2	45-46	0.0	0.0	0.0	9.7	7.5	8.5	0.0	0.0	0.0	25.7
6	36.8	39.6	53.1	57.0	64.6	72.1	75.0	71.9	70.0	60.9	52.7	42.5	58.0	46-47	0.0	0.0	0.0	4.0	10.0	14.7	13.5	0.0	0.0	42.2
7	41.2	31.4	38.6	57.0	66.5	71.4	74.5	76.1	65.3	63.5	44.8	37.7	56.2	47-48	0.0	0.0	1.0	0.0	9.5	16.0	0.5	0.0	0.0	27.0
8	29.5	39.3	48.7	58.4	65.3	73.4	76.8	74.6	67.7	55.5	51.2	40.8	56.8	48-49	0.0	0.0	2.0	1.4	0.0	3.5	0.0	0.0	0.0	6.9
9	43.2	44.3	48.4	55.3	65.7	74.3	78.8	75.5	66.0	62.3	49.1	40.5	58.6	49-50	0.0	0.0	0.0	0.5	0.0	7.0	5.0	0.0	0.0	12.5
0	42.9	38.0	42.2	53.6	65.0	71.0	74.4	74.5	66.7	60.0	47.0	34.3	56.0	50-51	0.0	0.0	1.0	6.5	1.0	1.0	1.5	0.0	0.0	11.0
1	38.8	38.7	45.0	56.1	65.3	73.1	77.1	75.9	70.3	61.9	43.2	40.0	57.1	51-52	0.0	0.0	0.0	5.5	1.5	0.0	0.0	0.0	0.0	7.0
2	40.8	40.8	45.2	57.0	65.4	71.1	74.0	75.4	68.6	56.7	49.9	38.5	57.9	52-53	0.0	0.0	3.0	1.8	0.8	0.0	8.0	1.5	0.0	15.1
3	40.4	43.4	46.7	56.6	70.8	73.8	76.4	77.4	69.5	58.1	50.8	40.9	55.8	53-54	0.0	0.0	10.6	0.0	8.0	0.0	0.0	0.5	0.0	19.1
4	36.8	43.6	46.3	60.8	62.5	73.2	77.4	76.8	74.4	63.2	44.6	36.7	58.1	54-55	0.0	0.0	2.0	5.0	6.0	0.5	0.0	0.0	0.0	13.5
5	36.3	38.6	49.6	60.8	68.3	70.0	80.8	77.0	69.0	60.1	46.7	34.0	57.6	55-56	0.0	0.0	2.0	0.5	5.5	3.5	11.9	0.0	0.0	23.4
6	36.4	42.2	45.2	55.0	64.5	73.6	77.1	75.5	67.0	59.3	46.8	47.2	57.5	56-57	0.0	0.0	0.0	0.0	9.7	3.1	0.5	2.0	0.0	15.3
7	34.6	41.0	46.0	59.6	67.6	73.6	78.1	75.7	70.2	54.1	49.4	40.9	57.6	57-58	0.0	0.0	2.0	4.5	1.0	15.8	16.5	0.0	0.0	39.8
8	33.8	30.8	41.1	56.1	64.1	70.1	77.5	74.5	65.5	58.1	52.0	32.9	55.0	58-59	0.0	0.0	0.0	1.0	2.0	0.0	0.0	3.0	0.0	6.0
9	34.9	39.5	46.7	58.7	69.0	74.2	76.7	78.3	70.8	59.9	46.2	41.2	58.0	59-60	0.0	0.0	0.0	0.0	4.5	11.7	29.8	0.0	0.0	46.0
0	38.3	36.9	34.3	61.6	63.4	73.0	75.7	76.8	65.6	59.1	50.6	33.7	56.1	60-61	0.0	0.0	0.0	7.0	12.5	21.3	0.7	0.0	0.0	41.5
1	32.1	40.1	49.0	52.0	61.9	71.3	76.8	75.2	73.0	60.3	50.6	37.2	56.6	61-62	0.0	0.0	1.8	7.2	11.0	7.1	26.5	0.0	0.0	53.6
2	34.7	35.7	43.3	56.0	68.5	71.8	73.9	74.4	65.8	61.5	45.4	34.6	55.5	62-63	0.0	0.0	0.0	17.3	0.4	5.3	1.0	0.0	0.0	24.0
3	32.5	31.2	50.3	57.2	64.2	73.3	77.4	75.6	67.0	51.0	31.4	51.1	51.1	63-64	0.0	0.0	0.0	7.8	8.2	21.2	1.0	0.3	0.0	38.5
4	31.9	34.0	47.3	55.1	61.2	74.5	77.0	74.0	66.0	55.7	53.8	35.7	57.2	64-65	0.0	0.0	0.3	0.0	10.0	4.0	1.5	0.0	0.0	15.8
5	35.7	37.1	42.7	54.4	70.9	70.7	76.2	75.5	71.3	56.6	49.7	42.3	56.9	65-66	0.0	0.0	0.0	0.5	29.4	5.5	0.0	0.0	0.0	39.4
6	32.2	35.9	47.9	52.8	64.5	74.2	80.2	76.6	67.9	56.4	49.5	36.7	56.2	66-67	0.0	0.0	0.0	15.0	4.5	15.1	0.0	0.0	0.0	34.6
7	40.3	33.6	45.7	58.8	59.3	72.1	74.4	73.3	66.2	57.0	44.5	40.8	55.5	67-68	0.0	0.0	1.7	4.0	10.6	0.5	2.0	0.0	0.0	18.8
8	31.6	34.1	50.0	58.2	62.3	73.5	77.0	77.5	69.8	60.2	49.7	35.3	56.6	68-69	0.0	0.0	8.0	0.0	0.0	5.8	16.5	0.0	0.0	30.3
9	32.5	36.2	42.9	58.7	66.6	73.4	76.6	74.1	68.1	58.9	47.1	34.9	55.8	69-70	0.0	0.0	0.0	17.0	5.5	2.5	0.0	0.0	0.0	25.0
0	30.2	36.7	42.3	56.6	68.4	74.0	76.7	76.2	74.2	61.1	48.1	39.9	57.0	70-71	0.0	0.0	0.0	0.0	12.4	0.4	9.3	2.8	0.0	24.9
1	32.7	37.6	43.1	56.4	63.1																			

TOTAL PRECIPITATION (INCHES)

PRECIPITATION WITH PROBABILITY EQUAL OR LESS THAN

.05 .10 .20 .30 .40 .50 .60 .70 .80 .90 .95

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL
1	2.59	0.71	1.46	3.92	0.33	3.87	7.26	0.95	1.02	0.90	1.42	4.48	29.11	1.15	1.41	1.78	2.09	2.35	2.67	2.98	3.35	3.81	4.51	5.15	5.15	
2	2.86	1.94	4.86	0.57	4.36	3.95	2.65	15.24	5.25	9.97	1.75	4.20	57.64	0.80	1.07	1.45	1.85	2.20	2.57	2.98	3.47	4.05	5.08	6.00	6.00	
3	2.55	0.91	3.42	3.15	3.28	4.18	5.38	1.81	1.75	1.79	1.31	2.54	32.51	1.66	2.02	2.52	2.93	3.31	3.70	4.12	4.60	5.20	6.13	6.97	6.97	
4	2.24	4.09	5.77	2.98	2.99	1.85	4.00	5.38	14.56	3.10	1.95	2.84	54.79	1.24	1.54	1.98	2.35	2.68	3.05	3.44	3.88	4.45	5.32	6.12	6.12	
5	2.80	2.62	0.86	3.33	4.32	1.83	8.28	0.74	7.63	1.20	3.62	5.68	42.91	1.40	1.77	2.30	2.74	3.17	3.60	4.07	4.62	5.32	6.41	7.40	7.40	
6	2.40	2.77	3.87	3.14	6.67	3.31	5.60	4.83	3.94	3.21	1.45	2.45	43.64	0.56	1.79	1.74	2.21	2.64	3.08	3.57	4.15	4.90	6.04	7.17	7.17	
7	4.92	1.23	2.83	3.23	3.70	7.20	4.63	2.19	3.11	2.60	5.53	1.05	42.26	0.76	2.34	3.04	3.63	4.19	4.77	5.40	6.12	7.06	8.49	9.81	9.81	
8	3.65	2.28	4.85	5.77	6.87	7.53	7.45	5.47	3.77	4.09	6.43	7.56	31.32	0.86	1.19	1.89	2.55	3.24	3.99	4.84	5.89	7.29	9.56	11.74	11.74	
9	5.22	1.60	2.74	2.54	4.68	3.01	4.50	10.65	3.21	2.79	0.91	2.16	44.01	0.59	0.90	1.40	1.87	2.35	2.87	3.47	4.20	5.16	6.73	8.23	8.23	
0	1.81	2.81	3.04	1.39	5.55	2.12	5.64	1.19	10.57	3.31	1.61	4.46	43.00	0.79	1.07	1.50	1.88	2.26	2.65	3.09	3.61	4.29	5.35	6.35	6.35	
1	1.64	3.40	4.62	4.84	2.39	7.19	3.91	2.26	1.55	1.63	4.92	5.44	43.49	0.89	1.21	1.71	2.16	2.59	3.05	3.56	4.17	4.96	6.21	7.33	7.33	
2	5.03	3.21	6.55	6.00	5.49	2.65	4.47	3.69	3.96	1.44	6.35	2.60	51.44	0.79	1.07	1.50	1.88	2.26	2.65	3.09	3.61	4.29	5.35	6.35	6.35	
3	4.50	3.02	6.42	3.27	4.49	4.31	0.76	2.50	1.06	1.64	1.78	4.45	38.19	0.79	1.07	1.50	1.88	2.26	2.65	3.09	3.61	4.29	5.35	6.35	6.35	
4	2.79	1.28	5.65	2.24	4.53	2.44	3.19	2.55	0.63	7.32	3.80	5.34	41.96	0.79	1.07	1.50	1.88	2.26	2.65	3.09	3.61	4.29	5.35	6.35	6.35	
5	0.57	3.75	5.20	5.04	2.56	5.35	2.58	11.68	1.92	1.63	1.63	0.36	42.75	0.89	1.21	1.71	2.16	2.59	3.05	3.56	4.17	4.96	6.21	7.33	7.33	
6	1.20	4.06	2.71	2.46	2.22	2.36	8.90	2.46	5.75	5.29	2.82	2.14	42.41	0.79	1.07	1.50	1.88	2.26	2.65	3.09	3.61	4.29	5.35	6.35	6.35	
7	2.43	3.98	2.38	4.63	3.13	3.45	2.22	1.35	7.15	3.60	4.07	3.56	42.65	0.79	1.07	1.50	1.88	2.26	2.65	3.09	3.61	4.29	5.35	6.35	6.35	
8	4.27	3.47	5.14	3.55	3.33	3.25	6.56	4.81	1.85	1.54	1.61	2.75	41.60	0.79	1.07	1.50	1.88	2.26	2.65	3.09	3.61	4.29	5.35	6.35	6.35	
9	1.64	0.99	3.52	1.72	2.14	4.84	6.11	6.49	4.25	7.16	2.73	3.37	47.40	0.79	1.07	1.50	1.88	2.26	2.65	3.09	3.61	4.29	5.35	6.35	6.35	
0	2.18	5.05	3.22	3.64	4.71	2.34	4.81	4.69	5.56	1.22	0.80	1.39	39.61	0.79	1.07	1.50	1.88	2.26	2.65	3.09	3.61	4.29	5.35	6.35	6.35	
1	2.29	4.94	3.12	5.52	4.05	3.41	3.41	10.49	2.52	9.27	2.16	4.30	55.55	0.79	1.07	1.50	1.88	2.26	2.65	3.09	3.61	4.29	5.35	6.35	6.35	
2	2.58	3.44	5.57	3.66	6.61	4.42	4.24	3.25	4.23	1.45	5.44	3.72	49.08	1.15	1.41	1.78	2.09	2.35	2.67	2.98	3.35	3.81	4.51	5.15	5.15	
3	1.50	2.04	5.66	1.53	2.14	1.74	2.61	2.31	2.56	0.18	6.02	1.50	30.39	0.80	1.07	1.45	1.85	2.20	2.57	2.98	3.47	4.05	5.08	6.00	6.00	
4	4.56	4.48	1.88	4.59	1.47	1.11	6.31	3.05	3.77	3.16	3.53	3.83	42.34	1.66	2.02	2.52	2.93	3.31	3.70	4.12	4.60	5.20	6.13	6.97	6.97	
5	3.41	5.16	4.09	2.83	2.20	2.30	3.57	4.69	2.55	3.55	0.79	6.42	35.61	1.24	1.54	1.98	2.35	2.68	3.05	3.44	3.88	4.45	5.32	6.12	6.12	
6	3.90	3.87	2.44	2.87	4.06	0.44	1.84	0.98	9.46	4.39	2.21	2.79	21.71	1.40	1.77	2.30	2.74	3.17	3.60	4.07	4.62	5.32	6.41	7.40	7.40	
7	1.82	2.26	6.09	0.89	4.24	0.91	5.94	8.50	1.88	4.10	1.35	6.05	44.63	0.56	1.79	1.74	2.21	2.64	3.08	3.57	4.15	4.90	6.04	7.17	7.17	
8	3.12	0.20	2.96	1.11	5.21	2.07	4.93	4.08	2.77	7.90	2.66	1.80	39.81	0.76	2.34	3.04	3.63	4.19	4.77	5.40	6.12	7.06	8.49	9.81	9.81	
9	2.65	2.91	3.45	1.84	5.01	1.75	9.40	9.52	2.92	1.22	2.45	6.21	55.57	0.79	1.07	1.50	1.88	2.26	2.65	3.09	3.61	4.29	5.35	6.35	6.35	
0	1.61	2.91	3.26	3.41	3.61	1.16	7.51	2.97	1.73	1.57	6.24	2.82	44.88	0.89	1.21	1.71	2.16	2.59	3.05	3.56	4.17	4.96	6.21	7.33	7.33	
1	2.95	5.19	2.74	2.42	10.53																					

Median precipitation amounts (0.50 probability level) in the above table differ from the means shown on the opposite page because of the method used in making the computations. The above values were determined from the incomplete gamma distribution whose curve has been found to give best fits to precipitation climatological series.